

# Understanding the Wicked Nature of “Unmanaged Recreation” in Colorado’s Front Range

## A Problem Analysis

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# Complexity for Natural Resource Problems

- **Socially Complex (wicked)**

- Numbers/diversity of stakeholders
- Social networks
- Public relations
- Cultural values



- **Technically Complex (tame, innocent)**

- Numerical analysis
- Economic efficiency
- Scientific rationality

# Unmanaged Recreation: The Fourth Threat

The major concerns are ... the Four Threats ... Fourth is unmanaged recreation. In many places, recreational use is outstripping our management capacity and damaging resources, particularly the unmanaged use of off-highway vehicles. This is a legitimate use of public lands, but we do need to manage it better (Bosworth 2004).



# Unmanaged Recreation: A Complex Threat

A combination of a lot of people, diverse interests, more free time, flexible schedules, technology all combine to put a lot of people on the forest for us ... That creates some problems. Unmanaged recreation is not strictly about ATVs or dirt bikes. They do play a large component. They fall under the umbrella of unmanaged recreation ... (Forest Service Employee).



# Purpose



- Describe the unmanaged recreation problem
- Discuss the implications of the nature of the problem

# Research Approach

- **A focused analysis of the problem**
  - Wickedness and social complexity
- **Rapid participatory appraisal** (Beebe 1995)
  - Document analysis
  - Literature review
  - Interviews and observations with key informants



# Wicked versus Tame Decision Problems

<b>Attribute</b>	<b>Wicked</b>	<b>Tame</b>
<b>Formulation of problem statement</b>	<b>Ill-defined, unstable</b>	<b>Well-defined, stable</b>
<b>Type of complexity</b>	<b>Social networks, cultural values</b>	<b>Technical, analytical, ecological</b>
<b>Diversity of stakeholders</b>	<b>High</b>	<b>Low</b>
<b>Commonality with other problems</b>	<b>Unique, time and place dependent</b>	<b>In a class of similar problems similarly solved</b>
<b>Preferred type of solution</b>	<b>Emotionally satisfying</b>	<b>Rationally best, optimal</b>
<b>Agreement on when solution is reached</b>	<b>Low</b>	<b>High</b>
<b>Set of alternative solutions</b>	<b>Numerous, unlimited</b>	<b>Limited</b>
<b>Cost of testing alternatives</b>	<b>High</b>	<b>Low</b>
<b>Evaluation of solution</b>	<b>Subjective, good or bad</b>	<b>Objective, right or wrong</b>

Adapted from Allen and Gould (1986), Conklin (2001), Nie (2003) and Rittel and Webber (1973).



# Sources of Wickedness and Social Complexity

- Trends in population and migration
- Urbanization of the National Forests
- Increased participation in outdoor recreation
- Changes in recreation technology
- Inadequate resources and employees for recreation



# Views of Forest Service Employees

- Better regulation of shooting, OHVs, geo-caching, group gatherings, etc.
- Inconsistent signing for roads/trails
- Sense of inalienable freedom in dispersed recreation
- Too few employees and under funding
- Checkerboard pattern of land ownership; private-public conflicts



# The Problem: A Manager's Perspective

... [People] should be able to go out and enjoy their national forest, but the cost for us is ... We have so many roads, so many trails, and so many acres of land to manage. We can't manage it all. We can't ... Even if our budget doubled, we wouldn't be able to keep up with the recreation demand, so our whole mode is to focus on areas where we can have some control—a lot of our developed areas, trail heads, picnic areas, and campgrounds—we do a good job of managing [those areas] ... and then focus on some of the areas that ... frankly—come up as *hotspots*. There are issues. People are complaining about certain things in certain places ... and most of these tend to be in ... urban front country ... it has certain characteristics ... proximity to developed private land, adjacent to the urban Front Range ... anything that's within an hour drive of Denver Metro ... It is heavily impacted ... That is where we are seeing a lot of *unmanaged* recreation and the effects (Forest Service Employee).



# Views of Motorized Groups

- Equal access to public lands
- Loss of recreation opportunities
- Recreation is restricted *not* unmanaged
- Lack of commitment, resources, and personnel properly manage outdoor recreation



# The Problem: Motorized Perspective

We are greatly concerned and see, all too frequently, little regard for the 'human element' in closing off areas to motorized vehicle use. We see other aspects of resource management being given clear and often exaggerated priority. The focus seems to be solely on land and resource protection, founded on extremist views and manufactured facts. Motorized use, even when permitted, is based on unreasonably strict conditions. We and our families, as motorized recreationists, end up being the ones unnecessarily hurt by these drastic decisions ... (Utah Shared Access Alliance 2005).



# Non-Motorized Views

- **Unregulated motorized recreation and resulting impacts define the unmanaged recreation problem**
- **Support federal rule to designate OHV routes**
- **Fear that existing federal resources are inadequate to implement and monitor the rule**



# The Problem: Non-Motorized Perspective

Unchecked motorized recreation causes severe and lasting damage to the natural environment on which human-powered recreation depends. In addition to placing soil, vegetation, air and water quality, and wildlife at risk ... habitat fragmentation ... unmanaged motorized use alters the remote and wild character of the backcountry, denying other users the quiet, pristine, backcountry experience they seek and presents safety and health threats to other recreationists ... [we] support efforts to address the serious and growing problem of renegade off-road vehicle use, [but we] worry that crafting new rules without devoting considerable resources for many years to implementing the rules ... funding, education, maintenance, monitoring, planning, and enforcement will result in continuing decline of our National Forests and human-powered recreational opportunities (Colorado Mountain Club 2004).



# Challenge, Family, Friends, Scenery ...



# ... or Unchecked Recreation and Resource Impacts?



# Conflicting Values and Wickedness

- **Unmanaged recreation inextricably linked to recreation values and environmental worldviews**
- **No one right solution on which the many groups may agree**
- **Creating “radical” uncertainty over how it should be addressed**



# Disagreement over Problem Definition

... radical uncertainty [is] ... a situation where not only the means, but also the goals and structure of a problem are ill-defined. Radical uncertainty brings into question the model of rational actor [and] traditional conceptions of science ... Intractable problems are different from the simple 'disagreements' of routine political debate. The latter can be resolved by appealing to 'facts' ... using shareable kinds of rational argument, refereed scientific research, past experience ... The former cannot. In this case, the parties in dispute tend to emphasize different facts, or give them different interpretations, so that each party seeks to confute the empirical evidence adduced by the others. There is no consensus either on the relevant knowledge or on the principals at stake. Facts and values overlap (Pellizzoni 2003:203).



# Implications

- **Wicked problems require innovative approaches**
- **Efficient, optimal models and generalized applications are ill-suited**
- **Reducing the problem to smaller tamer problems having technical solutions falls short**



# Considerations for Managers

- **Focus on local hotspots of conflict rather than the polarized national debate**
- **Identify all stakeholders and give equal weight to their perspectives**
- **Reward managers for using trust building and inclusive communication processes**
- **Provide training/require education to develop “people skills” for managers**
- **Motorized recreation is only one piece of the puzzle**

